

ELEN 4618 MIDTERM EXAM
SOLUTIONS

11/6/98

1a. $|V_{out}(t)| = 10V = V_{cc}$

1b. $V_L = \frac{V_{cc}}{3} = 3.33V$

$V_H = \frac{2V_{cc}}{3} = 6.67V$

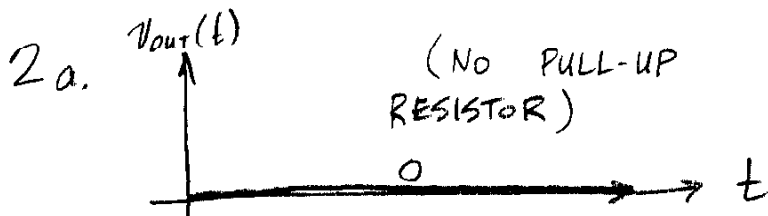
1c. $T = 13.86s = 2\tau \ln(2)$ WHERE $\tau = R_4 C_1$

1d. $|V_{out}(t)| = 15V$

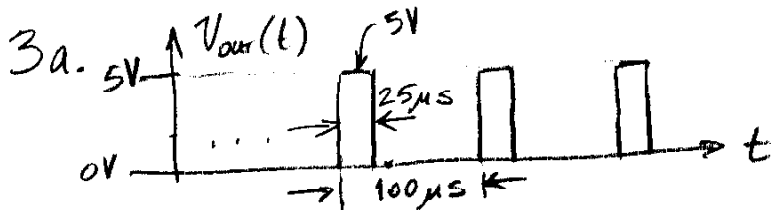
$V_L = 5V$

$V_H = 10V$

$T = 13.86s$ (NO DEPENDANCE ON V_{cc})



2b. CORRECTIONS: $1k\Omega$ PULL-UP IS CONNECTED TO PIN 3 INSTEAD OF PIN 7, $1M\Omega$ RESISTOR BETWEEN PIN 8 AND PIN 2 IS MISSING.



3b. ONE POSSIBLE SOLUTION IS...

